

19981110 081

NMD Joint Program Office
NMD Program Update to
AIAA/BMDO Technology Readiness
Conference



Cleared For Open Publication, Directorate
For Freedom Of Information And Security
Review, Department Of Defense

3 August 1998

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Director, System Test and Evaluation



PURPOSE

**Provide Overview of the Ongoing National Missile
Defense Program to the AIAA/BMDO Technology
Readiness Conference**





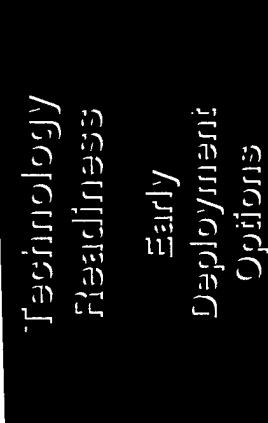
NATIONAL MISSILE DEFENSE EVOLUTION



1984



1987



1993



1996

Defense
Guideline
Program



- Program Evolved from "Star Wars" Global Protection Vision
- To Hedge Against Emergence of Rogue Nation Ballistic Missile Threat to U.S.



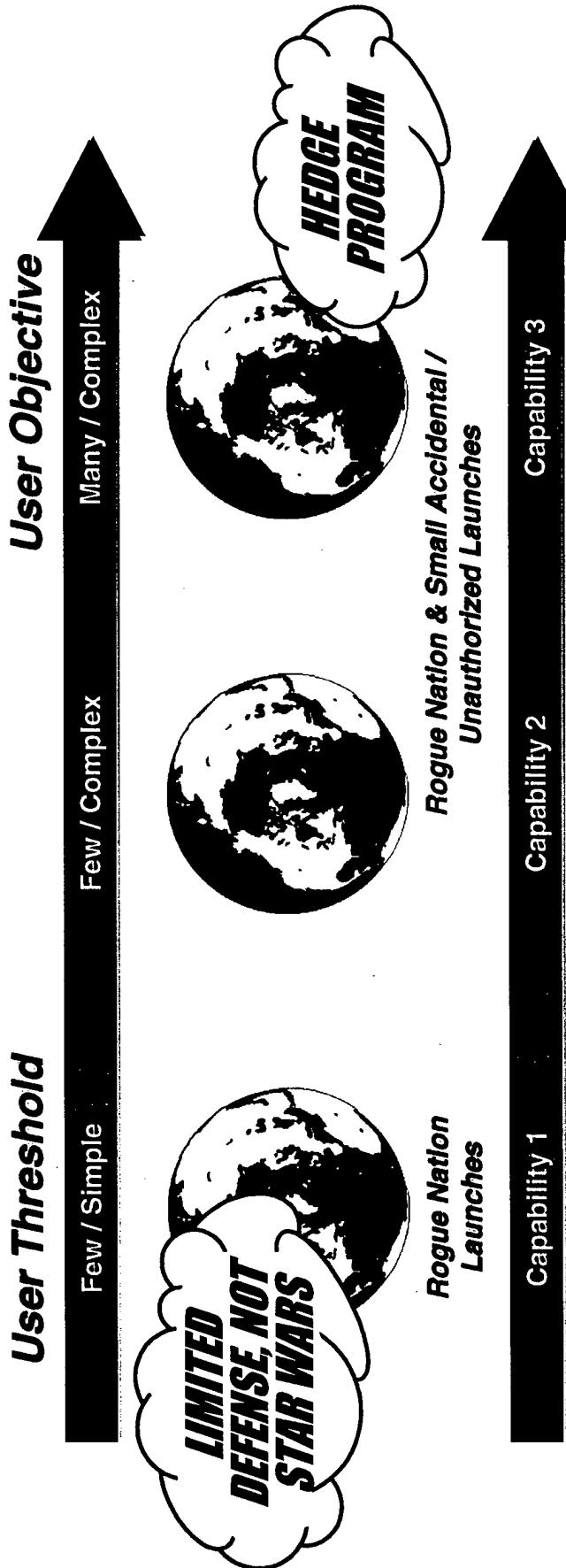
NMD KEY CHALLENGES

- *Uncertain Threat* - Gaining Consensus on Threat Type and when Threat Will Emerge
- *Compressed Schedule* - Conduct FY99 Demo and Deploy if Directed By FY03
- *Treaty* - Compliant During Development; May Not Be for Deployment
- *System Integration* - Integrate Existing National Missile Defense Elements
- *Performance* - Ability to Protect All 50 States





ILLUSTRATIVE NMD THREAT





NMD PROGRAM DEFINING ASSUMPTIONS



○ Sense of Urgency

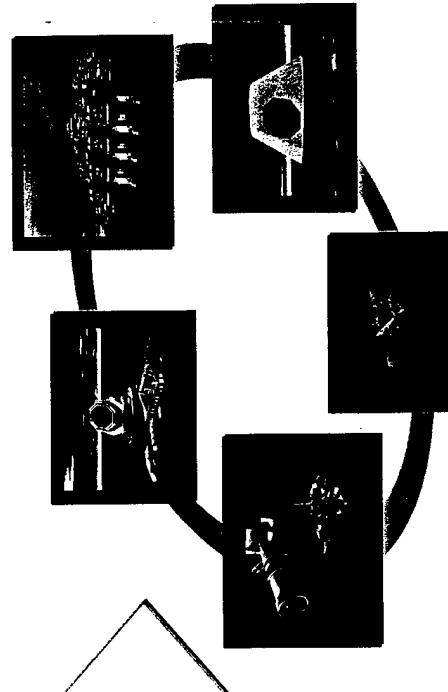
- Uncertain Threat

- NIE 95
- Rumsfeld Commission



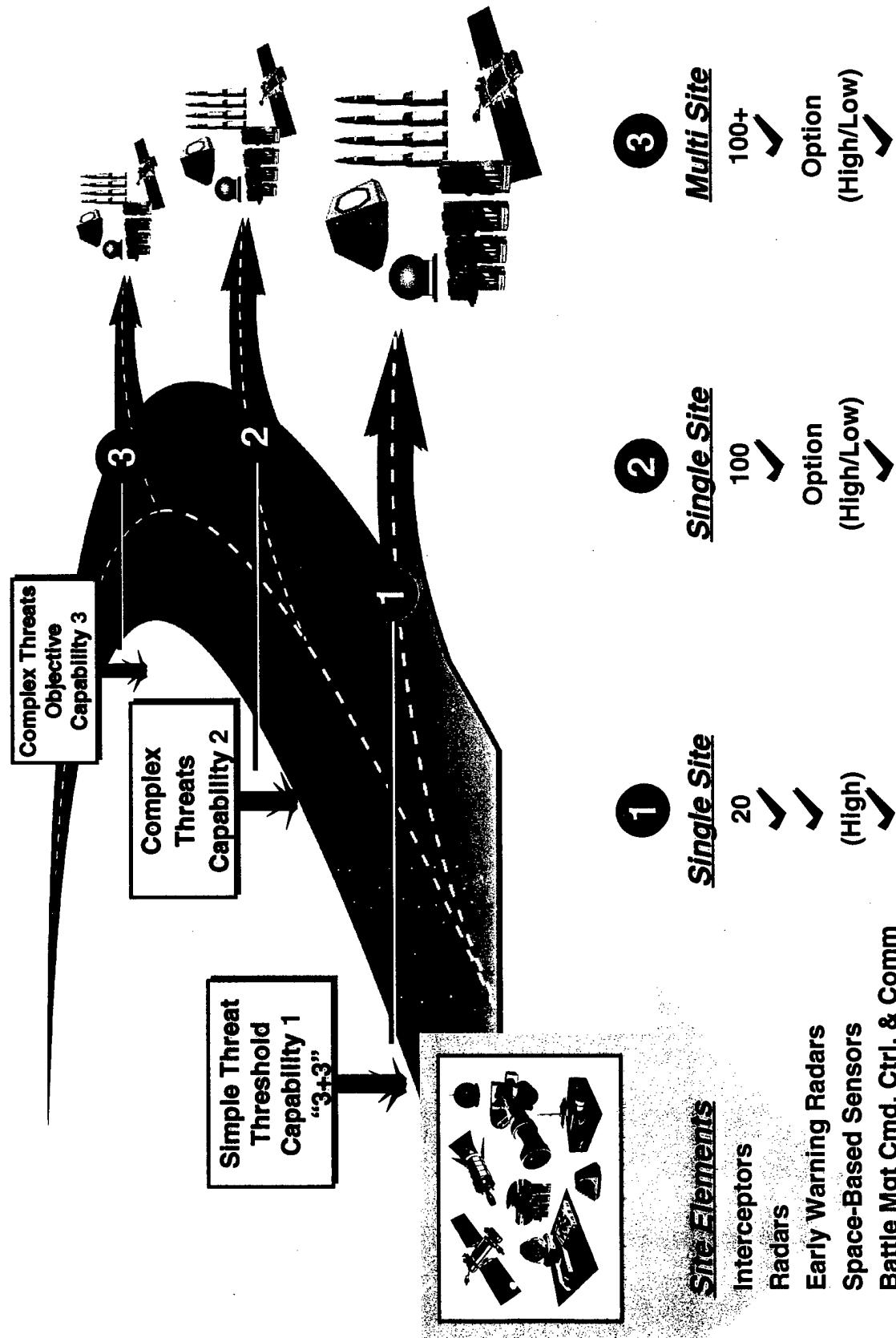
○ Rogue Nation Launches

○ NMD Requires a Systems Approach



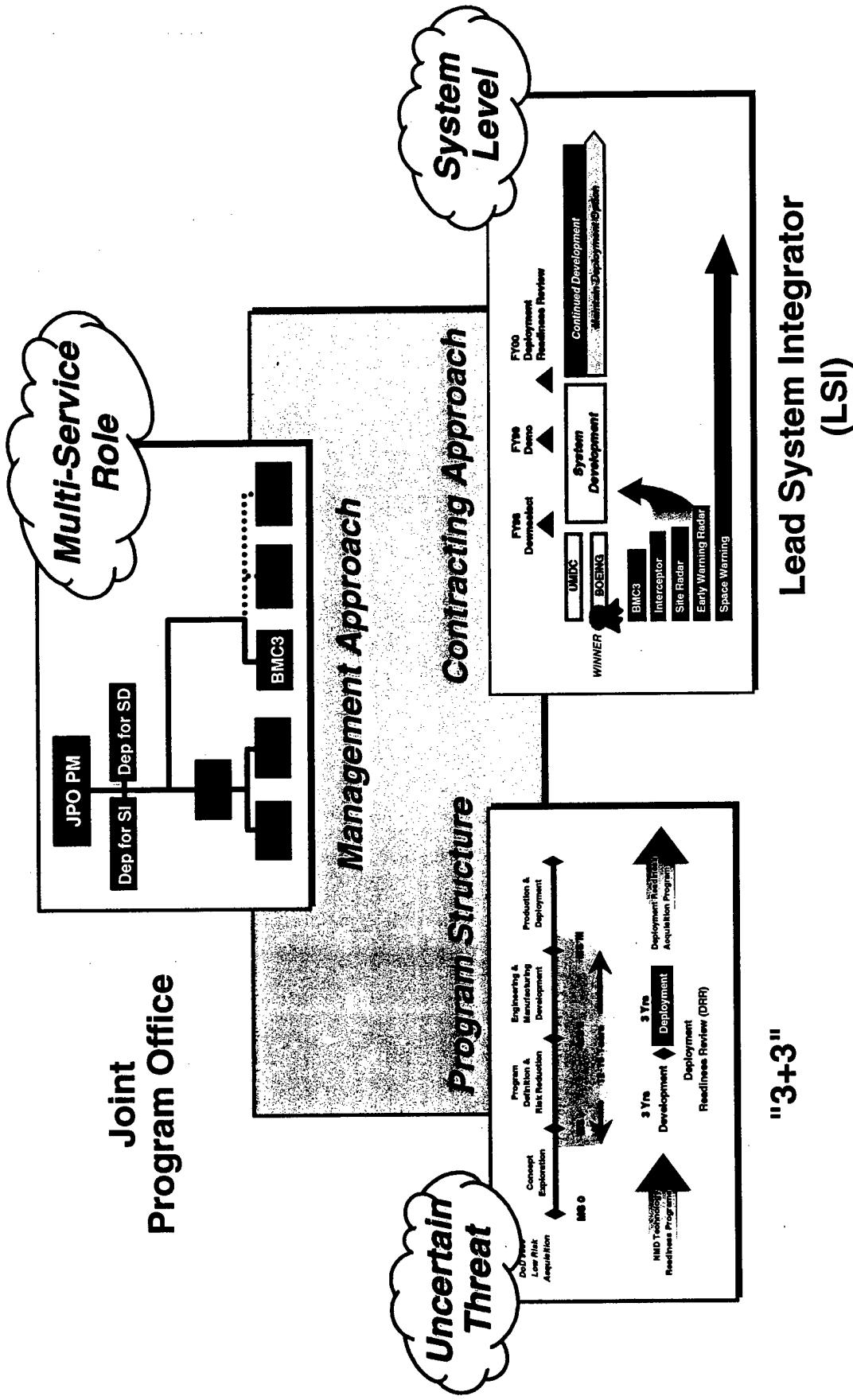
- Each Service has a Role
- USCINCSPACE is the User
- Trade Requirements between Elements

NMD ROADMAP



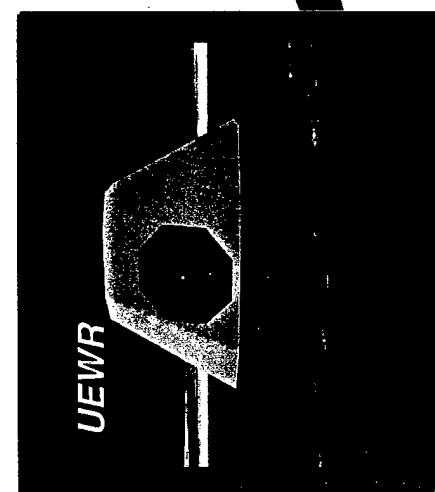
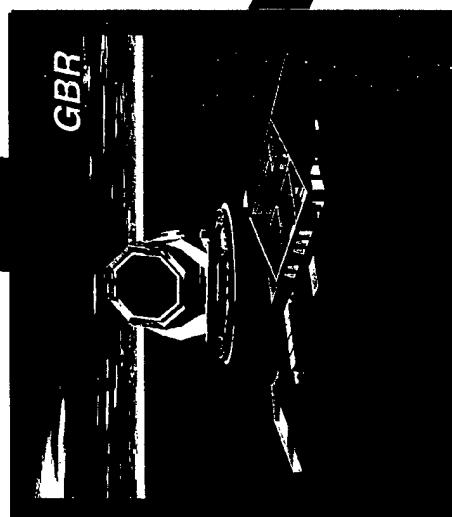
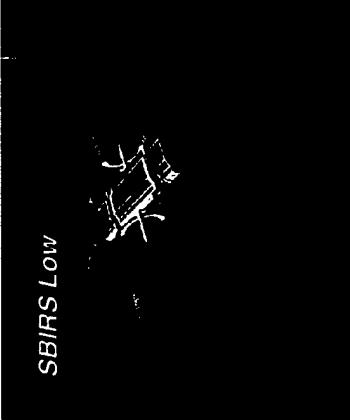
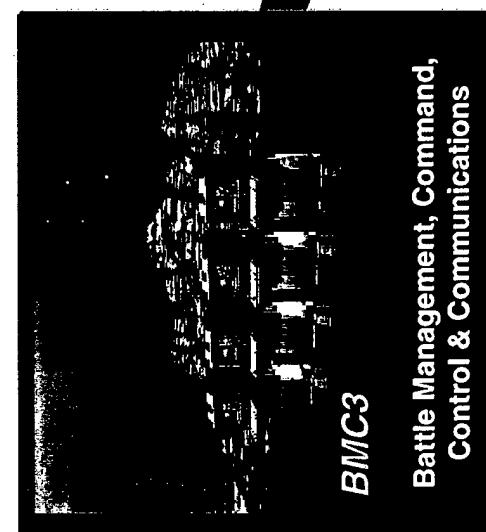
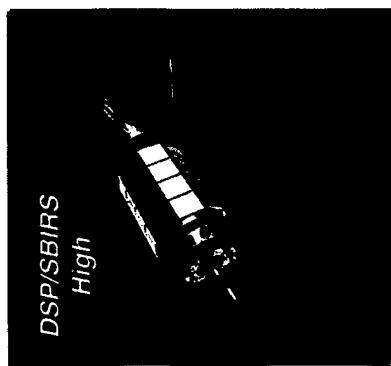


NMD PROGRAM STRATEGY

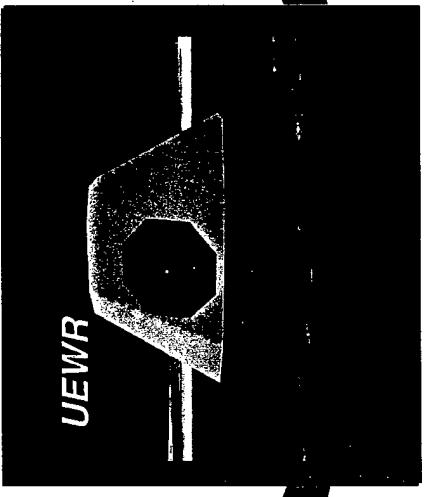




THE NMD SYSTEM ELEMENTS



GBI

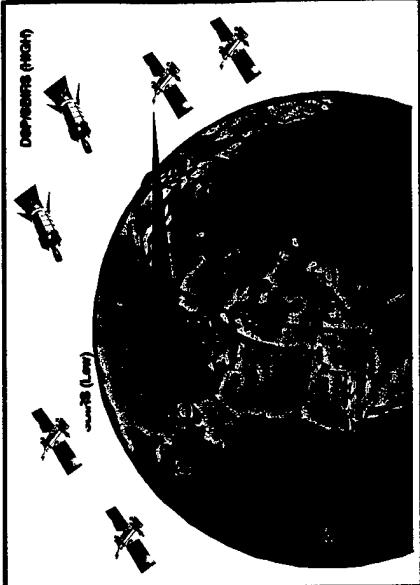
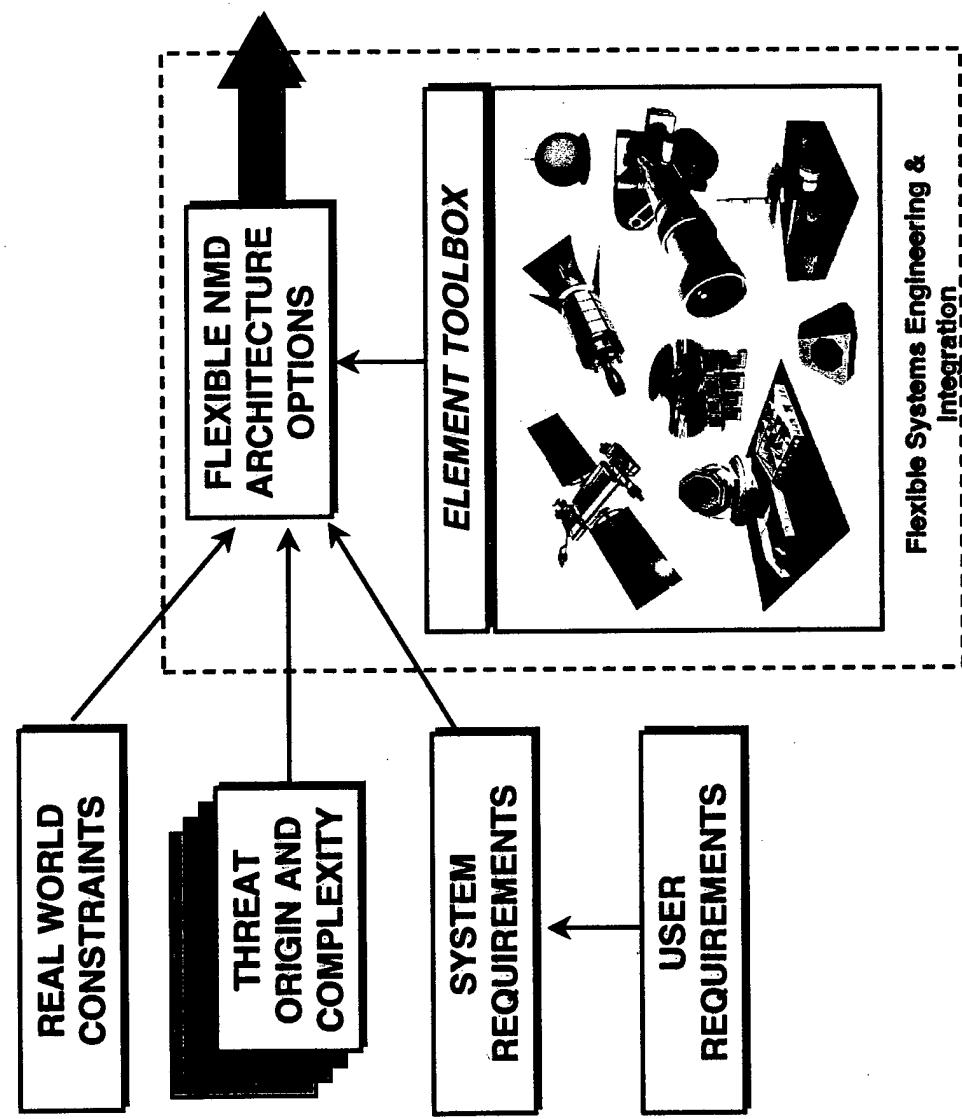


Battle Management, Command,
Control & Communications



NMD SYSTEM ARCHITECTURE

“Plug and Defend”



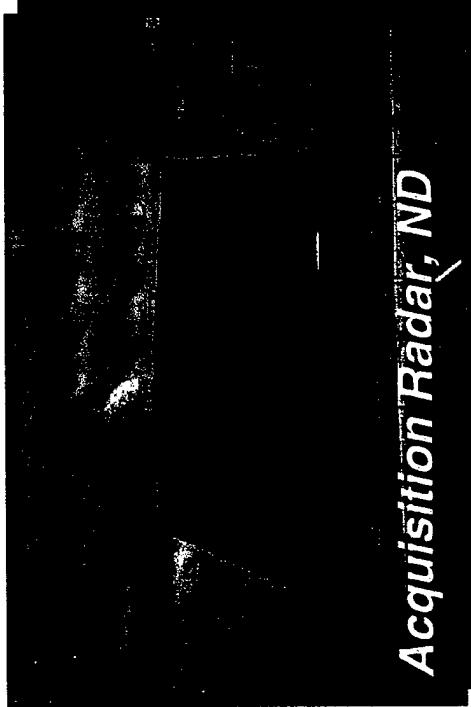
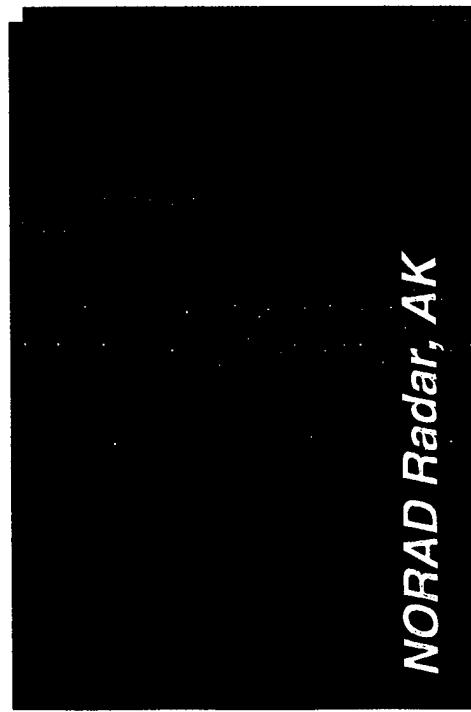
“Plug & Defend”
National Missile Defense
Deployment Options to Respond to
Unknowns in Threat and Constraints

Flexible Systems Engineering &
Integration



NMD SITE ACTIVITIES

- Fact Finding Visits Conducted in Both North Dakota and Alaska



Next Activities:
Area Narrowing Visits to Support Environmental Impact Process

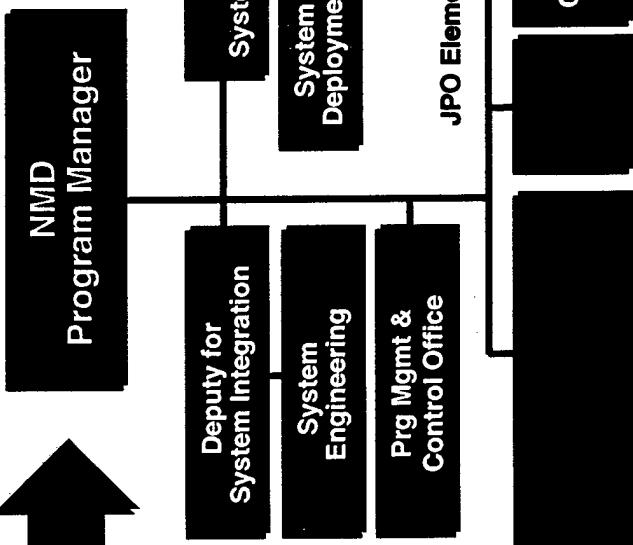
**The Specific Architecture and Site will be
Threat Driven - No Decision Yet**



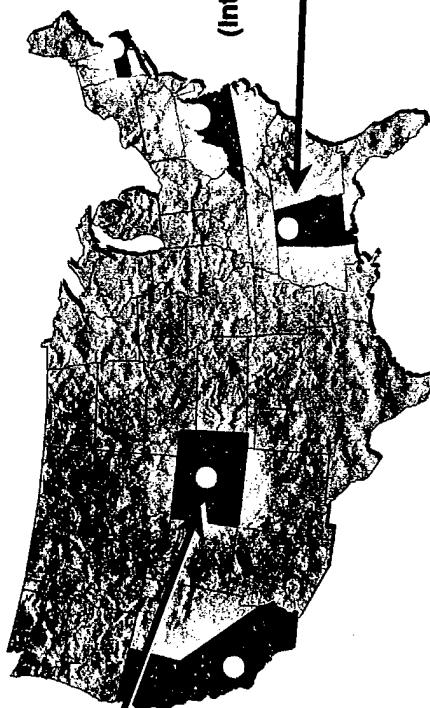
MANAGEMENT APPROACH JOINT PROGRAM OFFICE

Implement “3+3” Sourcing

- No Service Lead
(**SPACECOM Supported**)
- Federated Organization
- Direct Reporting
- Maximum Use of Prime



Joint National Test Facility (BM/C3)

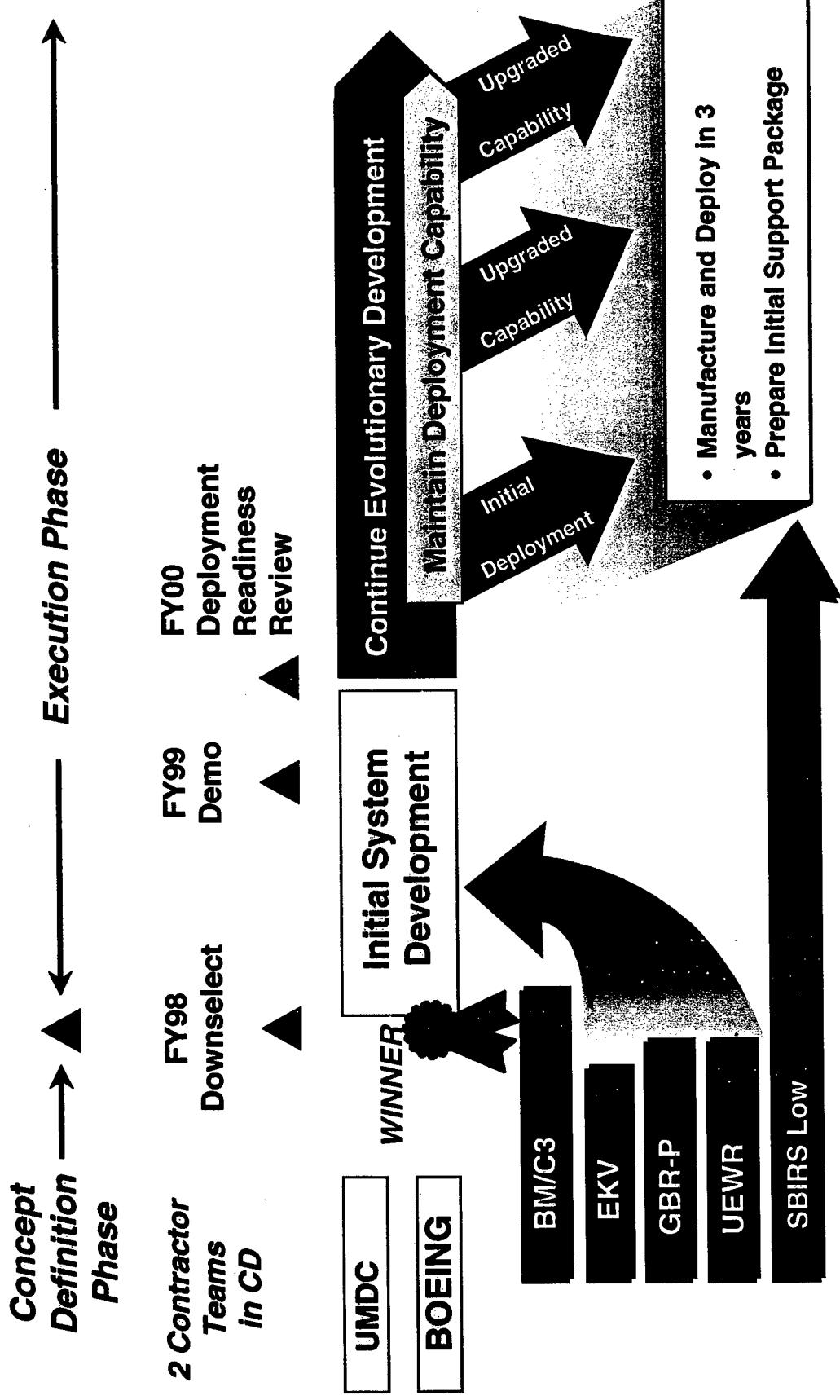


Electronic Systems Center (Early Warning Radars; BM/C3)

Joint Program Office (Integration; System Engineering; BM/C3)
Ground Based Elements PM (Interceptor / Radar; BM/C3)



CONTRACTING APPROACH LEAD SYSTEM INTEGRATOR





BOEING TEAM

Company

- Boeing
- Xontech
- TBE
- Booz-Allen Hamilton
- Logicon
- Photon Research Association
- Ryan Associates
- Schafer
- SRS Technologies
- Raytheon
- TRW

Responsibilities

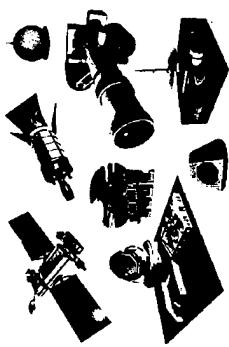
- Prime
- Sensors
- Test & Evaluation (T&E), System Eng (SE)
- SE, Battle Management Command and Control (BMC3), Test & Evaluation
- SE, Weapon
- SE
- SE, Sensors
- SE, Battle Management Command, Control & Communication, Test & Evaluation, Weapon
- Test & Evaluation, Weapon
- Radar
- Battle Management Command, Control & Communication



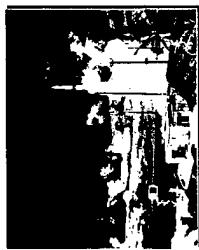
WHAT IS LSI PROVIDING?

Basic Period

Develops the
NMD Elements



Tests and
Demonstrates
NMD Capability



Plans the NMD
Deployment

Enhances NMD Capability Through Upgraded Elements

Deployment Option

Deploys the NMD System



Produce

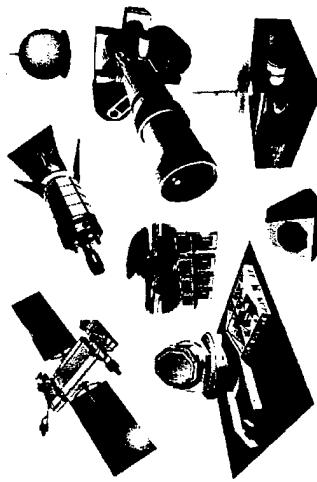


Train

Transport

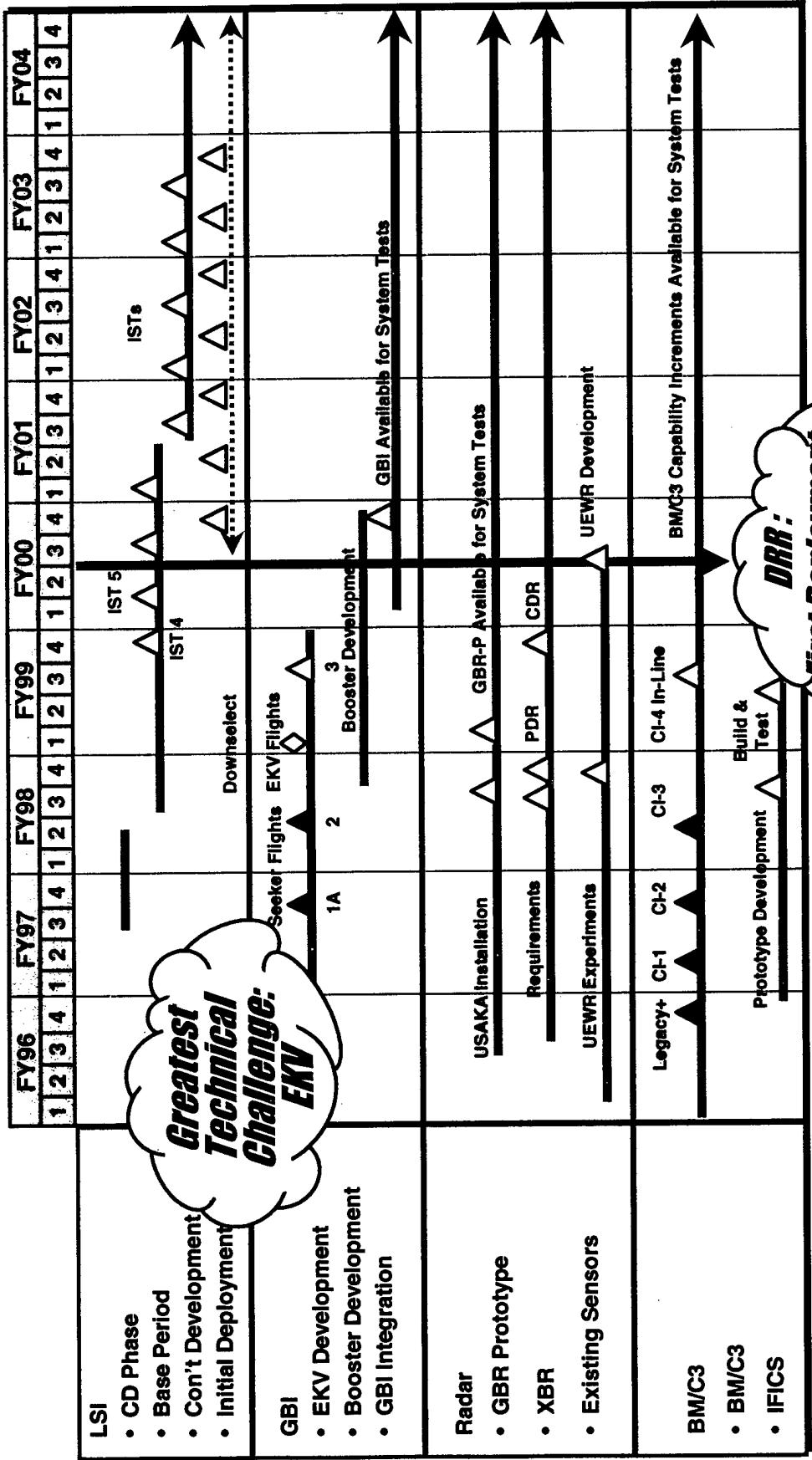
Continuing Development

Maintains Deployment Readiness





NMD PROGRAM SCHEDULE



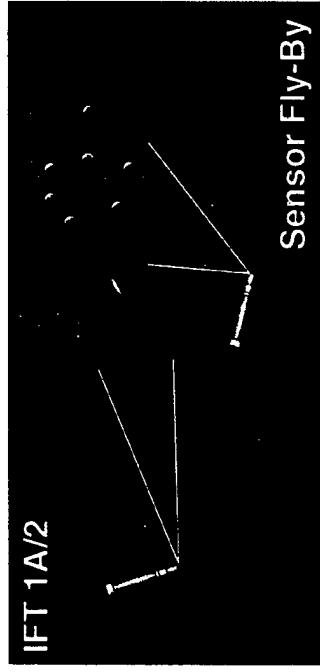


SYSTEM FLIGHT TESTS

Flights

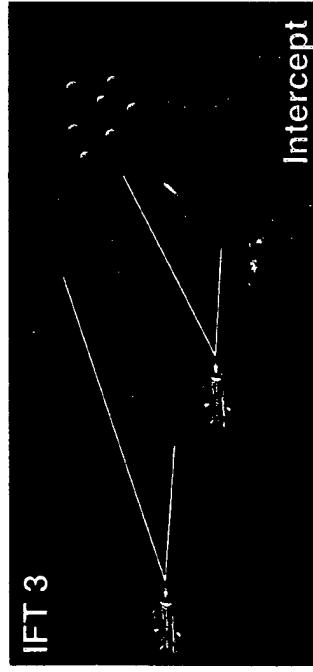
Program Objectives and Goals

- Risk Reduction for Kill Vehicle Tests
 - Demonstrate Kill Vehicle Sensor Performance
 - Collect Target Signatures to Validate Discrimination Algorithms
- Activate Test Infrastructure

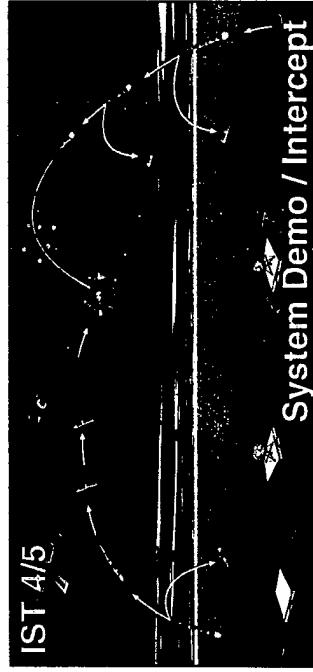


IFT 1A/2

IFT 3



IST 4/5

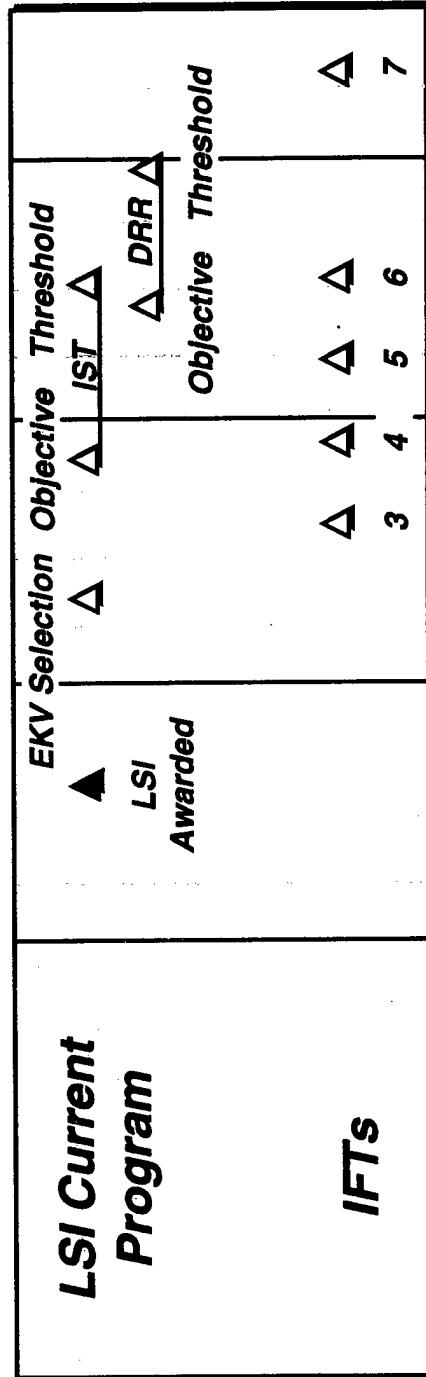


- Demonstrate Target Complex Acquisition
- Demonstrate Onboard Discrimination and Target Selection
- Demonstrate Endgame and Lethality Performance
- Demonstrate Interoperability of Elements



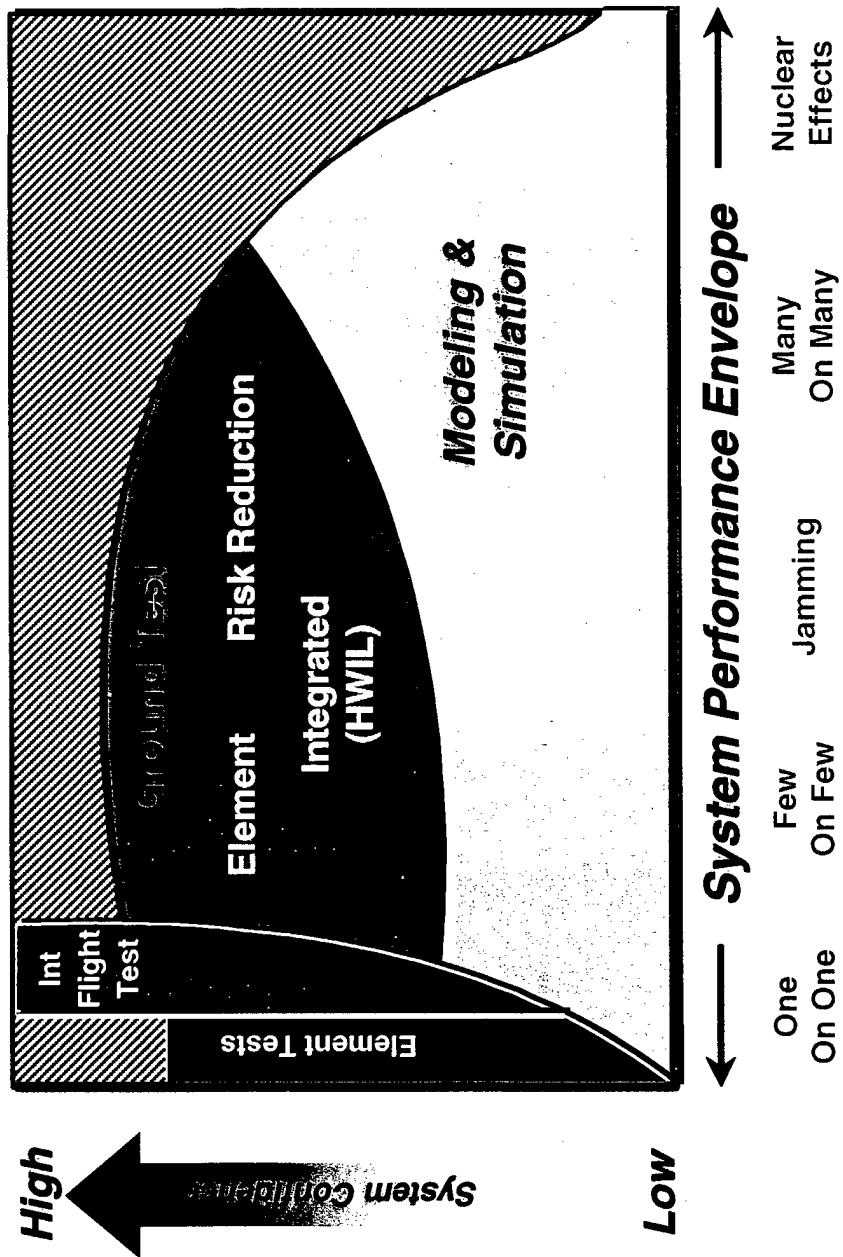
NMD FLIGHT TEST PROGRAM SCHEDULE

FY98				FY99				FY00				FY01	
1	2	3	4	1	2	3	4	1	2	3	4	1	2





ESTABLISHING SYSTEM CONFIDENCE

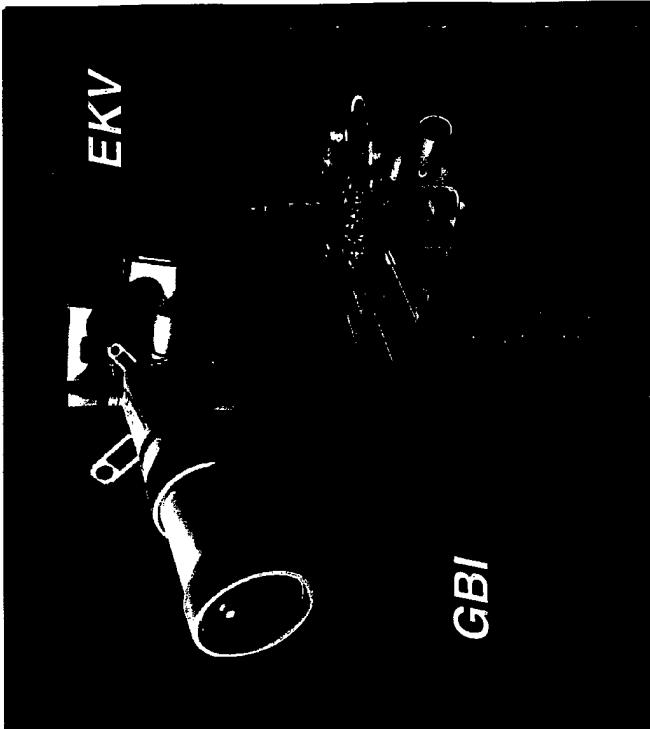


Evaluation of Test Results Establishes System Performance and Confidence Levels



MAJOR DECISIONS THROUGH NOV 98

- Government Select Ground Based Interceptor (GBI) Booster
- Refine Deployment Readiness Review Completion Criteria
- Exo-Atmospheric Kill Vehicle (Interceptor) Selection





MAJOR EVENTS THROUGH NOV 98



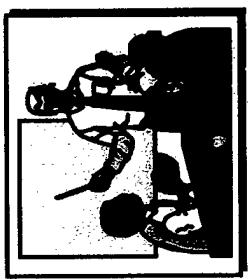
- System Functional Review
- Integrated Baseline Review
- Cost As An Independent Variable (Ongoing)
- Senior Department Review



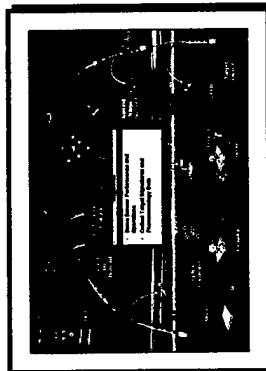
NMD PROGRAM ACCOMPLISHMENTS



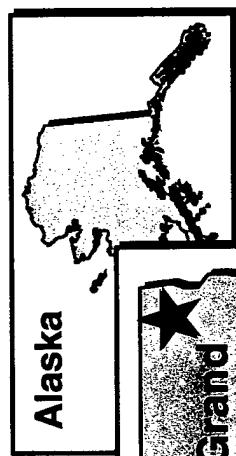
National Missile Defense Joint Program Office



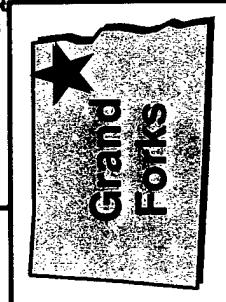
Defense Acquisition Board Process



Integrated Flight Tests 1A & 2



Alaska



Battle Management Cmd, Ctrl, & Comm Capability Increment 3

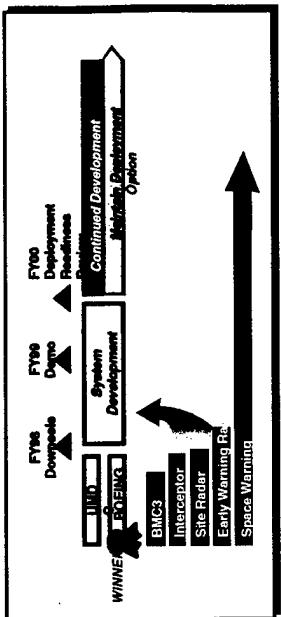
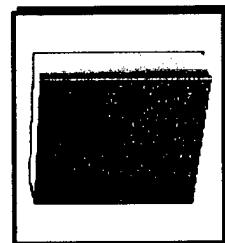


Site Planning and Visit

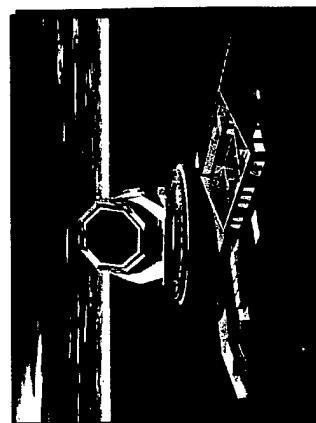
System Requirements Documents



Construction at Kwajalein



Lead System Integrator - Contract Awarded





SUMMARY

- Uncertain Threat 
- Multi-Service Contributions 
- Stove - Piped Element Development 
- Compressed Schedule 
- Flexible Architecture
- Joint Program Office
(No Service Lead)
- Lead System Integrator
- High Concurrency

“3+3” Program
High Schedule Risk...
But Structured and Funded for Greatest Opportunity
to Achieve Success